

Application S/N 10/005,820

Response to Office Action Mailed 9/7/05

Amendments to the Claims

Please amend the claims as follows:

1. (Previously presented) A deceleration – limiting barrier adapted to be installed alongside a vehicular roadway for protecting occupants of vehicles that collide with the barrier, comprising:
a net;

a first and second sacrificial panel sandwiching the net therebetween wherein the first and second sacrificial panels are adapted to extend alongside the vehicular roadway and comprise a means for holding up the net in a vertical position;

a plurality of anchors coupled to the first and second sacrificial panels and wherein the plurality of anchors does not comprise a means for supporting the net in a vertical position; and

a flexible strip arranged to secure the net to the plurality of anchors, with portions of the strip joined together in a manner as to be susceptible to being pulled apart under a load that is less than a load capacity of the strip.

2. (Previously presented) The barrier of claim 1, wherein the portions of the strip are joined with fasteners having a tensile strength that is less than the tensile strength of the strip.

3. (Previously presented) The barrier of claim 2, wherein the fasteners are stitched into the portions of the strip.

4. (Canceled)

Application S/N 10/005,820

Response to Office Action Mailed 9/7/05

5. (Previously presented) The barrier of claim 1, wherein the first sacrificial panel includes a smooth surface on one side, the first sacrificial panel comprising means for deflecting vehicles that collide only tangentially with the deceleration-limiting barrier.

6. (Canceled)

7. (Original) The barrier of claim 1, wherein a plurality of barriers are placed end-to-end alongside a roadway.

8. (Original) The barrier of claim 1, wherein the strip provides a substantially constant level of deceleration.

9. (Original) The barrier of claim 1, wherein the strip provides a non-constant level of deceleration.

10. (Previously presented) A barrier for limiting decelerating of a moving body, comprising:
means for receiving and retaining the moving body;
means for anchoring the receiving and retaining means wherein the means for anchoring is not a means for supporting the means for receiving and retaining in a vertical position;
means for decelerating the moving body in a controlled manner to thereby limit the deceleration thereof to below a predefined maximum deceleration level; and

Application S/N 10/005,820

Response to Office Action Mailed 9/7/05

a first and second sacrificial panel sandwiching the means for receiving and retaining therebetween and comprising a means for supporting the means for receiving and retaining in a vertical position.

11. (Canceled)

12. (Original) The barrier of claim 10, wherein the deceleration means provides a substantially constant level of deceleration.

13. (Original) The barrier of claim 10, wherein the deceleration means provides a non-constant level of deceleration.

14-21. (Canceled)

22. (Previously presented) A method of decelerating a vehicle moving along a vehicular roadway, comprising:

supporting a net with a first and second sacrificial panel that is also capable of deflecting moving vehicles colliding tangentially therewith such that no other vertical support for the net is required;

anchoring the first and second sacrificial panels to the ground;

breaking away the first sacrificial panel;

receiving the moving vehicle in the net;

Application S/N 10/005,820

Response to Office Action Mailed 9/7/05

deploying a plurality of energy absorbing straps attached to the net;
decelerating the moving vehicle using the energy absorbing straps; and
limiting the deceleration of the moving vehicle to a level below a predefined maximum deceleration level safe for occupants of the vehicle.

23. (Canceled)

24. (Previously presented) The method of claim 22, further comprising sandwiching the net between the first sacrificial panel and a second sacrificial panel.

25-26. (Canceled)

27. (Original) The method of claim 22, further comprising decelerating the moving body at a substantially constant deceleration.

28. (Original) The method of claim 22, further comprising decelerating the moving body at a non-constant deceleration.

29. (Previously presented) The deceleration-limiting barrier of claim 6 1 wherein the first and second sacrificial panels are made of a thin layer of epoxy, concrete or plywood, or combinations thereof.

Application S/N 10/005,820

Response to Office Action Mailed 9/7/05

30. (Previously presented) The barrier of claim 10 wherein the first sacrificial panel is made of a thin layer of epoxy, concrete or plywood, or combinations thereof.

31. (Canceled)

32. (Previously presented) The method of claim 22 wherein the first and second sacrificial panels are made of a thin layer of epoxy, concrete or plywood, or combinations thereof.

33-39. (Canceled)

40. (Previously presented) A barrier for decelerating a moving body, comprising:
means for receiving and retaining the moving body;
means for anchoring the receiving and retaining means wherein the means for anchoring is not a means for supporting the means for receiving and retaining in a vertical position;
a first and second sacrificial panel sandwiching the means for receiving and retaining therebetween and comprising a means for supporting the means for receiving and retaining in a vertical position; and
means for decelerating the moving body in a controlled manner to thereby limit the deceleration thereof to below a predefined maximum deceleration level, the means for decelerating the moving body comprising at least one flexible, energy absorbing strap connected intermediate the means for receiving and retaining the moving body and the means for anchoring the receiving and retaining means, the at least one strap having a plurality of loops formed

Application S/N 10/005,820

Response to Office Action Mailed 9/7/05

therein, mutually spaced along the strap and interconnected by unstitched portions of the strap, each loop being formed of mutually adjacent lengths of the strap stitched together by sacrificial stitching formed between the mutually adjacent lengths of strap and defining stitched portions in the respective loops, the tensile strength of the strap being greater than that of the stitches,

wherein the load capacity of the energy absorbing strap is expressed by the equation:

$$Load = Fr \cdot (Xm1 + Xm2 + Xm3 + \dots + Xmi)$$

wherein the energy absorbing stroke of each loop comprises the length of the respective stitched portion formed therein, and wherein the sum of $Xm1$, $Xm2$, $Xm3$, ..., Xmi represents the total stroke provided by the individual loops, and

wherein the load capacities of the loops differ.

41. (Previously presented) The barrier of Claim 40, the loops comprising means for applying successive decelerative forces upon a moving body impinging upon the means for receiving and retaining the moving body as the loops are ripped apart, the stitches of at least one of the loops being of greater tensile strength than those of at least one other loop, whereby the decelerative forces applied by the loop having stitches of greater tensile strength are greater than those applied by the at least one other loop.

42. (Previously presented) The barrier of Claim 41, wherein the energy absorbing strap comprises means for applying decelerative forces upon a moving body impinging upon the means for receiving and retaining the moving body as the loops are successively ripped apart.

Application S/N 10/005,820

Response to Office Action Mailed 9/7/05

43. (Previously presented) The barrier of Claim 40, wherein the energy absorbing strap comprises means for applying successively greater decelerative forces upon a moving body impinging upon the receiving means upon loops of successively greater load capacity being ripped apart.

44-48. (Canceled)

49. (Previously presented) A deceleration – limiting barrier adapted to be installed alongside a vehicular roadway for protecting occupants of vehicles that collide with the barrier, comprising:

a net;

a first and second sacrificial panel sandwiching the net therebetween, adapted to extend alongside the vehicular roadway, comprising a means for supporting the net in a vertical position, wherein the first sacrificial panel is formed of a smooth surface adapted to face the vehicular roadway and wherein the first sacrificial panel comprises a means for deflecting vehicles which collide only tangentially with the first sacrificial panel;

a plurality of anchors coupled to the first and second sacrificial panels and wherein the plurality of anchors does not comprise a means for supporting the net in a vertical position; and

a flexible strip arranged to secure the net to the plurality of anchors, with portions of the strip joined together in a manner as to be susceptible to being pulled apart under a load that is less than a load capacity of the strip.